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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/439,320 11/12/99 MOSS

N DKT94074A(80

EXAMINER

QM02/0523

PATENT DOCKET ADMINISTRATOR
BORG WARNER AUTOMOTIVE INC
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KWON, J

ART UNIT

PAPER NUMBER

3747

DATE MAILED:

05/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/439,320

Applicant(s)

MOSS ET AL.

Examiner

John T. Kwon

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

Housekeeping

Applicant(s) is(are) suggested to list a current telephone number, a facsimile number and a list of the attachments, if any, under the signature of the attorney/applicant for each response to the Office action(s) in order to expedite and make accurate the prosecution of the application.

1. The submission of the Information Disclosure Statement dated November 12, 1999 and July 6, 2000 has been received and fully considered. No further Information Disclosure Statement is in the records.

Finality is withdrawn

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Drawings

3. The submission of the formal drawings is approved.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beare (US 3,536,412) in view of the Australian patent (128,026). Beare discloses a conventional open type of impeller encompassed within the chambers in a centrifugal pump. The cross-section of the chamber is reducing from an inlet opening to an outlet opening. However, Beare does not show the use of a cross-sectional area of the chamber is reducing from an inlet opening to an outlet opening continuously. The Australian patent shows that the provision of a constant reduction of the area of the chamber from an inlet opening to an outlet opening is old and well known in the art (Col. 3, lines 15-24). Since the prior art references are from the field of endeavor, the purpose disclosed by the Australian patent would have been recognized in the pertinent art of Beare. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of Beare with the chamber area reduced from an inlet opening to an outlet opening continuously as taught by the Australian patent.

6. Claims 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beare (US 3,536,412) in view of Liskow (US 5,464,319) and the Australian patent (128,026). Beare discloses a conventional open type of impeller encompassed within the chambers in a centrifugal pump. The cross-section of the chamber is reducing from an inlet opening to an outlet opening. However, Beare does not show the use of a stripper between an inlet opening and an outlet

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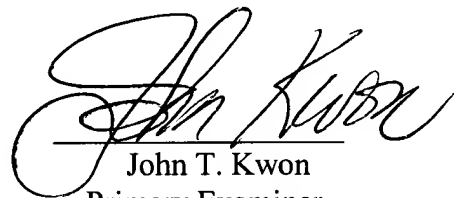
opening. Liskow shows that the provision of a stripper between an inlet opening and an outlet opening is old and well known in the art. Since the prior art references are from the field of endeavor, the purpose disclosed by Liskow would have been recognized in the pertinent art of Beare. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of Beare with the stripper as taught by Liskow. Beare as modified shows the pump with the stripper between the openings as explained above, but does not show the use of a cross-sectional area of the chamber is reducing from an inlet opening to an outlet opening continuously. The Australian patent shows that the provision of a constant reduction of the area of the chamber from an inlet opening to an outlet opening is old and well known in the art (Col. 3, lines 15-24). Since the prior art references are from the field of endeavor, the purpose disclosed by the Australian patent would have been recognized in the pertinent art of Beare. Therefore, it would have been further obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of Beare with the chamber area reduced from an inlet opening to an outlet opening continuously as taught by the Australian patent. Regarding the specific reduction between the inlet area and the outlet area, it would have been considered to be an obvious choice of mechanical design because one skilled in this art is familiar with basic fluid mechanic and normally has the laboratory test facilities. To optimize or select the suitable shape of the chamber, flow path reduction between the inlet area and the outlet area would be within the ability of ordinary skilled in this art.

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Contact Information

Any inquiry concerning this communication should be directed to Examiner Kwon at telephone number (703) 308-1046 and facsimile numbers (703) 305-3588. The examiner can normally be reached on Monday thru Friday from 8:30 AM to 5:00 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read "John T. Kwon", is written over a horizontal line.

John T. Kwon
Primary Examiner
Art Unit 3747

May 22, 2001

Enclosure(s);

See the attachment(s) section of the Office Action Summary.